a phase change recording layer which converts between the crystal phase and the amorphous phase by irradiation with the recording beam;

a reflective layer; and

a phase control layer disposed between said transparent substrate and said phase change recording layer, said phase control layer having two areas defined in a laser spot, the laser spot defined by where the reproducing beam is incident to said phase control layer,

wherein:

the irradiation with the reproducing beam of said phase control layer within the laser spot causes a phase difference due to one of the two areas changing between a crystal and an amorphous phase that alters an optical path of the reproducing beam reflected from said phase change recording layer so as to prevent portions of the reproducing beam reflected from said phase change recording layer from passing through the one area that has converted between the crystalline and the amorphous state,

said phase change recording layer does not change phases when irradiated by the reproducing beam, and

the phase control layer comprises a material selected from the group consisting essentially of GeSbTe, InSbTe, and Ni.

C1 cont.

5. (THREE TIMES AMENDED)The phase change optical disc of claim 1, wherein said phase control layer is InSbTe.

C2

8. (THREE TIMES AMENDED)The phase change optical disc of claim 1, wherein said phase control layer is Ni.

C3

11. (TWICE AMENDED)The phase change optical disc of claim 2, wherein said phase change recording layer comprises a material selected from the group consisting essentially of

C4

CA cont.

GeSbTe, InSbTe, and AgInSbTe.

13. (THREE TIMES AMENDED)The phase change optical disc of claim 11, wherein the C5 phase control layer is InSbTe.

NE 14. (NOT AMENDED)The phase change optical disc of claim 1, wherein one of the two areas defined on said phase control layer has a phase difference, which alters an optical path of the reproducing beam reflected from said phase change recording layer, that substantially has a minimum value of 0 degrees, and the other area has a phase difference, which alters an optical path of the reproducing beam reflected from said phase change recording layer, that has a maximum value of 180 degrees.

15. (TWICE AMENDED)The phase change optical disc of claim 1, wherein said phase C6 change recording layer comprises a material selected from the group consisting essentially of GeSbTe, InSbTe, and AgInSbTe.

SUB B2 18. (THREE TIMES AMENDED) A phase change optical disc compatible with a recording beam and having multiple layers formed on a transparent substrate, the multiple layers including a reflective layer, comprising:

a phase change recording layer which converts between the crystal phase and the amorphous phase by irradiation with the recording beam; and

C7 a phase control layer disposed between the transparent substrate and said phase change recording layer, said phase control layer having a plurality of areas defined in a laser spot, the laser spot defined by where the reproducing beam is incident to said phase control layer,

wherein:

the irradiation of the laser spot on said phase control layer with the reproducing beam causes a phase difference in the plurality of areas on said phase control layer due to ones of the plurality of areas being converted between a crystalline and an amorphous state that alters an optical path of the reproducing beam reflected from said phase change recording layer so as to prevent portions of the reproducing beam reflected from said phase change recording layer from passing through the ones of the areas that have converted between the crystalline and the amorphous state,

C1 cont

said phase change recording layer does not change phases when irradiated by the reproducing beam, and

the phase control layer comprises a material selected from the group consisting essentially of GeSbTe, InSbTe, and Ni.

21. (ONCE AMENDED) An optical disc compatible with a reproducing beam and having multiple layers formed on a transparent substrate, comprising:

a recording layer having recording marks to be reproduced using the reproducing beam forming a first laser spot on said recording layer; and

a phase control layer disposed between the transparent substrate and said recording layer upon which the reproducing beam forms a second laser spot,

wherein:

C8

the irradiation of the second laser spot on said phase control layer causes one area of said phase control layer within the second laser spot to be converted between a crystalline and an amorphous state so as to alter an optical path of a portion of the reproducing beam such that the second laser spot is larger than the first laser spot, and

the phase control layer comprises a material selected from the group consisting essentially of GeSbTe, InSbTe, and Ni.